## Listing of Claims

1. (currently amended) In a traffic control system for coordinated operation of a plurality of traffic control lights; a malfunction management unit having input terminals for receiving control signals grouped in channels and used to operate the traffic control lights; assignment means for establishing a parent channel-child channel relationship for the purpose of Red Fail fault testing; monitoring means for detecting a Red Fail fault from the signals in the parent channel and the child channel <u>and for generating a Red Fail fault signal when all parent channel signals and some child channel signals are concurrently inactive</u> ; and an output <u>coupled to said monitoring means</u> for controlling the operation of an output relay used to transfer the operation of the traffic control lights to a flashing mode of operation when such a Red Fail <u>fault</u> is detected.

2. (currently amended) The ~~invention~~ <u>system</u> of claim 1 wherein said malfunction management unit includes a manually settable switch for enabling and disabling said monitoring means.

3. (currently amended) The ~~invention~~ <u>system</u> of claim 1 wherein said malfunction management unit includes a display for indicating whether a Red Fail fault has occurred.

4. (currently amended) The ~~invention~~ <u>system</u> of claim 1 wherein said child channel has Green, Walk, and Yellow control signals; and wherein said ~~monitoring means ignores the Yellow~~ <u>some child channel</u> signals <u>comprise said Green and Walk control signals</u> for Red Fail <u>fault</u> testing.

5. (currently amended) The ~~invention~~ <u>system</u> of claim 1 wherein said child channel has Green, Walk, and Yellow control signals; and wherein said ~~monitoring means examines all the~~ <u>some</u> child channel signals <u>comprise said Green, Walk, and Yellow control signals</u> for Red Fail <u>fault</u> testing.

6. (currently amended) A method of monitoring for Red Fail faults in a traffic control system for coordinated operation of a plurality of traffic control lights; said method comprising the steps of:

(a) providing a plurality of input terminals for receiving control signals grouped in channels and used to operate the traffic control lights;

(b) establishing a parent channel-child channel relationship for the purpose of Red Fail fault testing;

(c) detecting a Red Fail fault from the signals in the parent channel and the child channel <u>by generating a Red Fail fault signal when all parent channel signals and some child channel signals are concurrently inactive</u>; and

(d) controlling the operation of an output relay used to transfer the operation of the traffic control lights to a flashing mode of operation when such a Red Fail <u>fault</u> is detected.

7. (currently amended) The ~~invention~~ <u>method</u> of claim 6 further including the step of providing a manually settable switch for enabling and disabling said ~~monitoring means~~ <u>step (c) of detecting</u>.

8. (currently amended) The ~~invention~~ <u>method</u> of claim 6 further including the step of providing a display for indicating whether a Red Fail fault has occurred.

9. (currently amended) The ~~invention~~ <u>method</u> of claim 6 wherein said child channel has Green, Walk, and Yellow control signals; and wherein ~~the Yellow signals are ignored during~~ said step (c) of detecting <u>includes the step of generating a Red Fail fault signal when all parent channel signals and said Green and Walk control signals are concurrently inactive</u>.

10. (currently amended) The ~~invention~~ <u>method</u> of claim 6 wherein said child channel has Green, Walk, and Yellow control signals; and wherein ~~the Yellow signals are included during~~ said step (c) of detecting <u>includes the step of</u>

<u>generating a Red Fail fault signal when all parent channel signals and said Green , Walk and Yellow control signals are concurrently inactive</u>.

11. (new). The system of claim 1 wherein said monitoring means includes delay means for establishing a minimum time period during which all parent channel signals and some child channel signals are concurrently inactive before permitting the generation of said Red Fail fault signal.

12. (new) The method of claim 5 wherein said step (c) includes the step of waiting a minimum time period during which all parent channel signals and some child channel signals are concurrently inactive before generating the Red Fail fault signal.